CLAIMS:

1. A method of fabricating a magnetic head device comprising a slider having a magnetic head element, a suspension structure made of a thin resilient material and having one end supporting the slider and the other end to be attached to another member, and a head IC chip , the method including the steps of:

mounting the head IC chip on the suspension structure so as to face a magnetic recording disc and at a position spaced from the slider-supporting one end of the suspension structure by an intervening portion of the suspension structure; and

selecting the position so that the intervening portion is effective to suppress a temperature increase in the head IC chip due to at least thermal conduction through said intervening portion.

2. The method of claim 1 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip which is a bare chip.

3. The method of claim 1 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip on the suspension structure by flip-chip-bonding.

4. The method of claim 1 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip which has a mass smaller than 1.0 mg.

5. A method of increasing cooling of a head IC chip in a magnetic head device comprising a slider having a magnetic head element, a suspension structure made of a thin resilient material and having one and supporting the slider and the other end to be attached to another member, and a head IC chip, the method including the steps of:

mounting the head IC chip on the suspension structure so as to face a magnetic recording disc and at a position spaced from the slider-supporting one end of the suspension structure by an intervening portion of the suspension structure; and

selecting the position so that the intervening portion is effective to suppress a temperature increase in the head IC chip due to at least thermal conduction through said intervening portion.

6. A method of fabricating a magnetic head device comprising a slider having a magnetic head element, a suspension structure made of a thin resilient material and having one end supporting the slider and the other end to be attached to another member, and a head IC chip, the method including the steps of:

mounting the head IC chip on the suspension structure so as to face a magnetic recording disc and at a position spaced from said slider-supporting one end of the suspension structure;

mounting the slider on the slider-supporting one end of the suspension structure so as to face a magnetic recording disc; and

selecting the head IC chip position defined by,

$$0.2 \leqq Lb/La \leqq 1$$

where La is a distance between the slider and a point of attachment of the suspension structure to said other member, and Lb is a distance between the slider and the head IC chip.

7. The method of claim 6 wherein the step of selecting a head IC chip position includes selecting the head IC chip position defined by $0.3 \leqq Lb/La \leqq 0.7$.

8. The method of claim 6 wherein the step of selecting a head IC chip position includes selecting the head IC chip position defined by $0.4 \leqq Lb/La \leqq 0.7$.

9. The method of claim 6 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip which is a bare chip.

10. The method of claim 6 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip on the suspension structure by flip-chip-bonding.

11. The method of claim 6 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip which has a mass smaller than 1.0 mg.

12. A method of increasing cooling of a head IC chip in a magnetic head device comprising a slider having a magnetic head element, a suspension structure made of a thin resilient material and having one end supporting the slider and the other end to be attached to another member, and a head IC chip, the method including the steps of:

mounting the head IC chip on the suspension structure so as to face a magnetic recording disc and at a position spaced from said slider-supporting one end of the suspension structure;

mounting the slider on the slider-supporting one end of the suspension structure so as to face a magnetic recording disc; and

selecting the head IC chip position defined by,

$$0.2 \leq Lb/La \leq 1$$

where La is a distance between the slider and a point of attachment of the suspension structure to said other member, and Lb is a distance between the slider to the head IC chip.

13. A method of fabricating a magnetic disc device comprising a magnetic head device including a slider having a magnetic head element and a suspension structure having one end supporting the slider, a rotatable magnetic disc, a head IC chip which is a separately-formed component from the slider, and an

electrically conductive connecting device for establishing an electrical connection between the magnetic head element and the head IC chip , the method including the steps of:

mounting the head IC chip on the connecting device so as to face the magnetic disc;

rotating the magnetic disc at least when the head IC chip is in operation; and

selecting the mounting position of the head IC chip on the connecting device where the head IC Chip is always exposed to a flow of air produced by rotations of the magnetic disc so that the head IC chip is continuously cooled by the flow of air at least when the head IC chip is in operation.

14. The method of claim 13 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip which is a bare chip.

15. The method of claim 13 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip on the suspension structure by flip-chip-bonding.

16. The method of claim 13 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip which has a mass smaller than 1.0 mg.

17. The method of claim 13 wherein the step of selecting a mounting position of a head IC chip includes selecting the mounting position of the head IC chip so that the head IC chip is located inside an outer periphery of the magnetic disc at least when the head IC chip is in operation.

18. A method of increasing cooling of a head IC chip in a magnetic disc device comprising a magnetic head device including a slider having a magnetic head element and a suspension structure having one end supporting the slider, a rotatable magnetic disc, a head IC chip which is a separately-formed component from the slider, and an electrically conductive connecting device for establishing an electrical connection between the magnetic head element and the head IC chip , the method including the steps of:

mounting the head IC chip on the connecting device so as to face the magnetic disc;

rotating the magnetic disc at least when the head IC chip is in operation; and

selecting the mounting position of the head IC chip on the connecting device where the head IC chip is always exposed to a flow of air produced by rotations of the magnetic disc so that the head IC chip is continuously cooled by the flow of air at least when the head IC chip is in operation.

19. A method of fabricating a magnetic disc device comprising a magnetic head device including a slider having a magnetic head element and a suspension structure having one end supporting the slider, a rotatable magnetic disc, a head IC chip which is a separately-formed component from the slider, and an electrically conductive connecting device for establishing an electrical connection between the magnetic head element and the head IC chip, the method including the steps of:

mounting the head IC chip on the connecting device so as to face the magnetic disc;

rotating the magnetic disc at least when the head IC chip is in operation; and

controlling a position of the suspension structure so that the head IC chip is located inside an outer periphery of said magnetic disc at least when the head IC chip is in operation.

20. The method of claim 19 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip which is a bare chip.

21. The method of claim 19 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip on the suspension structure by flip-chip-bonding.

22. The method of claim 19 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip which has a mass smaller than 1.0 mg.

23. A method of increasing cooling of a head IC chip in a magnetic disc device comprising a magnetic head device including a slider having a magnetic head element and a suspension structure having one end supporting the slider, a rotatable magnetic disc, a head IC chip which is a separately-formed component from the slider, and an electrically conductive connecting device for establishing an electrical connection between the magnetic head element and the head IC chip , the method including the steps of:

mounting the head IC chip on the connecting device so as to face the magnetic disc;

rotating the magnetic disc at least when the head IC chip is in operation; and

controlling a position of the suspension structure so that the head IC chip is located inside an outer periphery of said magnetic disc at least when the head IC chip is in operation.

24. A method of fabricating a magnetic disc device comprising a magnetic head device including a slider having a magnetic head element and a suspension structure having one end supporting the slider, a rotatable magnetic disc, a head IC chip which is a separately-formed component from the slider, and an

electrically conductive connecting device for establishing an electrical connection between the magnetic head element and the head IC chip, the method including the steps of:

mounting the head IC chip on the connecting device so as to face the magnetic disc;

rotating the magnetic disc at least when the head IC chip is in operation;

selecting the mounting position of the head IC chip on the connecting device where the head IC chip is always exposed to a flow of air produced by rotations of the magnetic disc so that the head IC chip is continuously cooled by the flow of air at least when the head IC chip is in operation; and

arranging for the head IC chip to be located with respect to the magnetic disc with a distance between opposing surfaces of the head IC chip and the magnetic disc smaller than 1000 μm.

25. The method of claim 24 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip which is a bare chip.

26. The method of claim 24 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip on the suspension structure by flip-chip-bonding.

27. The method of claim 24 wherein the step of mounting a head IC chip on a suspension structure includes mounting the head IC chip which has a mass smaller than 1.0 mg.

28. The method of claim 24 wherein the step of selecting a mounting position of a head IC chip includes selecting the mounting position of the head IC chip so that the head IC chip is located inside an outer periphery of the magnetic disc at least when the head IC chip is in operation.

29. A method of increasing cooling of a head IC chip in a magnetic disc device comprising a magnetic head device including a slider having a magnetic head element and a suspension structure having one end supporting the slider, a rotatable magnetic disc, a head IC chip which is a separately-formed component from the slider, and an electrically conductive connecting device for establishing an electrical connection between the magnetic head element and the head IC chip, the method including the steps of:

mounting the head IC chip on the connecting device so as to face the magnetic disc;

rotating the magnetic disc at least when the head IC chip is in operation;

selecting the mounting position of the head IC chip on the connecting device where the head IC chip is always exposed to a flow of air produced by rotations of the magnetic disc so that

the head IC chip is continuously cooled by the flow of air at least when the head IC chip is in operation; and

arranging for the head IC chip to be located with respect to the magnetic disc with a distance between opposing surfaces of the head IC chip and the magnetic disc smaller than 1000 μm.